REMARKS/ARGUMENTS

Applicant has reviewed and considered the Final Office Action mailed on January 4, 2006, and the references cited therewith.

Claims 1-20 are pending in this application.

§ 102 Rejection of the Claims

Claims 1-2, 7, 12, 14 and 15 were rejected under 35 USC § 102(e) as being anticipated by U.S. Patent No. 6,574,629 to Cooke et al. ("Cooke").

Applicant respectfully traverses the rejections as follows.

Claims 1, 7, and 14

The Examiner has essentially repeated the rejection of claims 1, 7, and 14 as presented in the Office Action dated May 6, 2005. In response, Applicant respectfully repeats the August 10, 2005 discussion as to why Cooke does not teach all of the elements recited in claims 1, 7, and 14. In addition, Applicant addresses the Examiner's response to these arguments below.

Applicant respectfully submits that Cooke does not teach or suggest all elements recited in the Applicant's claims. The Office Action states that "Cooke discloses receiving images or studies from imaging modalities . . . and routing the image data based on a predetermined routing rules based on a set destination (destination information) and patient location (patient data) and use the routing rules to select a route to route the network communication based on destination and patient location (patient data) (col. 2, lines 33-49)." (Final Office Action, page 2).

However, Cooke provides for many different components of a picture archiving and communication system (PACS), none of which appear to route image data based on a comparison of patient data to a set of routing rules and select a route from routing information based on the comparison and on the destination information of the network communication, as provided in claim 1.

First, Cooke provides for a "network gateway" that "receives images (as image data) . . . , confirms the validity of the received images, and routes them

appropriately." (Col. 9, lines 65-67, col. 10, lines 1-3) The network gateway also receives "studies from one or more imaging modalities . . . and provides DICOM security and validation services therefor." (Col. 10, lines 16-19). The network gateway also provides for RIS validation to ensure the integrity of patient demographic information in the studies which can be validated based on pre-stored information. (col. 10, lines 29-38). The network gateway "routes studies directly to a station. . . based on routing rules defined by a combination of one or more of the routing attributes set forth below in Table 3." (Col. 15, lines 66-67, col. 16, lines 1-5). Table 3 provides routing attributes that the network gateway uses to form routing rules, it includes: "The RIS maintains a list of patient locations that is essentially a road-map to each bed in the hospital. Reviewing stations are located in a physical space that maps to some patient location number. For example, it is possible to create routes to trauma centers, ICU, and emergency rooms using the patient location as the routing criteria." (Col. 16, Table 3).

It appears from reading Table 3 carefully, that Cooke is describing a routing rule based on patient location, which when read in conjunction with the fact that the images are sent to reviewing stations that are located in a physical space, would mean a reviewing station located as close as possible to the patient location. By this, it would appear that Cooke's "patient location" is more accurately described, then, as "destination information" and not "patient data." Accordingly, it appears that Cooke does not teach selecting a route from routing information based on the destination information of the network communication and a result of comparing at least a portion of the patient data to a set of routing rules.

Cooke also provides a "PACS broker" or a "RIS gateway" which:

".... makes patient demographics, schedules, study parameters, and reports on the RIS available to the core PACS components. A PACS broker, or its equivalent, is therefore generally used if image/study routing is to be performed by the network gateway based on referring physician or patient location. Moreover, the PACS broker can be programmed to update patient information in the core components periodically . . . ." (Col. 13, lines 9-17)

Cooke also provides for a "database server" which "performs a variety of functions relating to retrieval and storage of studies located in the archive station(s). Among other things, the database server collects, organizes and manages patient and study demographic data that is contained in DICOM header files of each study." (Col. 10, lines 57-62). Also, Cooke provides that the network gateway can receive a study from the PACS broker, where the

> "Network gateway 6 then executes code to determine, in step 61, if the study is broken, meaning that it has demographic data that is incorrect in that is [sic] conflicts with information already contained on the PACS. In this regard, as noted above in section 1.3, the network gateway maintains study demographic information for validation purposes. This is the information used to determine whether a study is broken. In the event that the study is broken, the network gateway executes code in step 62 to store the study in its private cache, from which the PACS administrator may 'fix' the broken study in step 64. Studies that are fixed, or that are not broken, are routed to appropriate PACS (e.g., reviewing) stations using routing rules, as shown in step 65." (Col. 16, lines 50-63).

From this, Cooke appears to teach that study demographic information can be compared with information stored on the PACS system, however, the network gateway does not route based on this comparison, rather, it stops the retrieval and delivery process until the information is "fixed" and then routes based on the routing rules described previously. More specifically, the network gateway routes based on destination information and not patient data.

The Office Action also states that Figure 13 shows a "study information form (received network communication) comprises patient ID (patient data) and location ICU (destination)." (Final Office Action, page 2). Cooke does provide a representative example of the study information form displayed which does include entries for "patient ID, name, sex, location, study ID, date, time, station, . . .and keywords (user-assigned word(s) for identifying a study quickly from a list of studies)." (Col. 22, lines 22-30). However, although the information shown on Figure 13 would be "patient data," this data is not being used to route the studies. Moreover, there is no comparison being performed on this data where the comparison is used for routing the study. Instead, as discussed above, the

information is used by the network gateway to determine if the study is "broken" and whether the study should be routed based on destination information provided, not based on the patient data itself.

So, Cooke does not teach or suggest that the routing rules are based on patient data. Rather, Cooke provides that patient information can be updated in the core components periodically, but not that it is used for routing rules for the network gateway (col. 13, lines 12-18). Also, "patient location" is more appropriately termed "destination information," not "patient data," as the patient location is used to send images to the reviewing station closest (geographically) to the patient.

In addition, Applicant respectfully submits that it appears the Examiner is relying upon an inherency argument in rejecting claims 1, 7, and 14. As is appreciated, the express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. However, "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." M.P.E.P. 2112, Sec. IV. Rather "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" M.P.E.P. 2112, Sec. IV. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." M.P.E.P. 2112, Sec. IV.

Applicant respectfully submits that the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from Cooke. The Examiner asserts that "even though Cook [sic] does not disclose a comparing step, this step is inherent in Cooke's method because images and studies are routed to an appreciate [sic] location based on routing rules that includes destination set and patient location (patient data) which can not be achieved unless the destination information and

patient location (patient data) included in these images are compared, matched or correlated to destination set and patient location (patient data) in the routing rules in order to determine the appropriate route based on that comparison." (Final Office Action, page 2) As discussed above, however, Cooke does not appear to teach a PACS to route image data based on a comparison of patient data to a set of routing rules and select a route from routing information based on the comparison and on the destination information of the network communication. In addition, the Examiner has not provided objective evidence or cogent technical reasoning as to where and/or how Cooke provides support for the conclusion of inherency.

As such, Cooke does not teach or suggest all elements recited in independent claims 1, 7, and 14.

Accordingly, reconsideration and withdrawal of the §102 rejection for independent claims 1, 7, and 14, as well as those claims which depend therefrom, is respectfully requested.

Claim 12

The Examiner has essentially repeated the rejection of claim 12 as presented in the Office Action dated May 6, 2005. In response, Applicant respectfully repeats the August 10, 2005 discussion as to why Cooke does not teach all of the elements recited in claim 12. In addition, Applicant addresses the Examiner's response to these arguments below.

As previously presented, the cited document does not teach or suggest all of the elements recited in claim 12. For example, Cooke does not teach or suggest a computer-readable medium storing data comprising routing information mapping destinations to routes within a medical imaging network, wherein the routing information maps Digital Imaging and Communication in Medicine Application Entity Names (AENames) to routes within the medical imaging network.

In contrast, Cooke provides "a form which may be used to assign a routing name to each imaging modality, and to provide other information regarding the imaging modality to the PACS." (Col. 17, lines 35-37) Figure 7 is an example of the form. Table 81 includes "a station name box 82 for assigning an alias to the

imaging modality. . ., a field mapping box 86 for inputting whether the modality requires DICOM mapping of an accession number or patient ID, . . . [and] a routing pattern box 90 for inputting a routing pattern associated with the modality[.]" (Col. 17, lines 44-54) So, Cooke does not provide for routing information that maps destinations to routes, but rather provides for a user to input a routing pattern associated with an image modality.

Accordingly, reconsideration and withdrawal of the § 102 rejection for independent claim 12, as well as those claims which depend therefrom, is respectfully requested.

§ 103 Rejection of the Claims

Claims 3, 8, and 16 were rejected under 35 USC § 103(a) as being unpatentable over Cooke as applied to claims 2, 7, and 15 above and further in view of F. Foiravanti et al. "The Organization and Management of a Wide Environment of DICOM Compliant Device: the DICOM Domain Management Service Class", IEEE pp 20-25, 1998.

Claims 4, 9, and 17 were rejected under 35 USC § 103(a) as being unpatentable over Cooke as applied to claims 1, 7, and 14 and in view of Rothschild et al. (U.S. Patent Publication No. 2002/0016718).

Claims 5-6, 10-11, 13, 18-20 were rejected under 35 USC § 103(a) as being unpatentable over Cooke as applied to claims 1 and 7 above and further in view of Stephen T .C. Wong et al. "A Digital Library for Biomedical Imaging on the Internet." IEEE, pp. 84-91, 1999.

Applicant respectfully traverses the rejections as follows.

Claims 3-6, 8-11, 13, 16, and 17

The Examiner has essentially repeated the rejection of claims 3-6, 8-11, 13, 16, and 17 as presented in the Office Action dated May 6, 2005. In response, Applicant respectfully repeats the August 10, 2005 discussion as to why Cooke does

not teach all of the elements recited in claims 3-6, 8-11, 13, 16, and 17. In addition, Applicant addresses the Examiner's response to these arguments below.

The Examiner cited Cooke to at least illustrate a "network gateway." As discussed above, Cooke provides a network gateway that receives "image data" and "routes the image data to at least one of the archive station and the reviewing station based on a set of rules in the network gateway" (Abstract), but does not teach or suggest the use of patient data, as discussed above for independent claims 1, 7, and 14 above. Cooke does provide for routing based on patient location, however, as discussed above, patient location as described in Cooke is better described as destination information rather than patient data.

The Examiner cited Foiravanti to at least illustrate the use of a system for organizing DICOM services in a hospital structure. The Examiner also cited Rothschild to at least illustrate a medical image management system and method that manages and stores the transmission of electronic records. Finally, the Examiner cited Wong to at least illustrate that XML will further enhance browser capabilities by providing user-defined types. Foiravanti, Rothschild, and Wong, however, do not cure the above identified deficiencies of Cooke. As such, each and every element of independent claims 1, 7, and 14 is not taught or suggested in Cooke and Foiravanti; Cooke and Rothschild; and Cooke and Wong, either independently or in combination. As claims 3-6 are dependent claims of independent claim 1; claims 8-11 are dependent claims of independent claim 7; and claims 16 and 17 are dependent claims of independent claim 14, the 103 rejection of claims 3-6, 8-11, 16, and 17 should be withdrawn.

With respect to claim 13, Cooke does not teach or suggest a computer-readable medium storing data comprising routing information mapping destinations to routes within a medical imaging network, where the routing information maps Digital Imaging and Communication in Medicine Application Entity Names (AENames) to routes within the medical imaging network, as discussed above for independent claim 12. The Examiner cited Wong to at least illustrate that XML will further enhance browser capabilities by providing user-defined types. Wong, however, does not cure the above identified deficiencies of Cooke. As such, each

and every element of independent claim 12 is not taught or suggested in Cooke and Wong, either independently or in combination. As claim 13 is a dependent claim of independent claim 12, the 103 rejection of claim 13 should be withdrawn.

Reconsideration and withdrawal of the 103 rejection for claims 3-6, 8-11, 13, 16, and 17 is respectfully requested.

Claims 18-20

The Examiner has essentially repeated the rejection of claims 18-20 as presented in the Office Action dated May 6, 2005. In response, Applicant respectfully repeats the August 10, 2005 discussion as to why Cooke does not teach all of the elements recited in claims 18-20. In addition, Applicant addresses the Examiner's response to these arguments below.

Applicant respectfully submits that the cited references do not teach or suggest all elements recited in the Applicant's claims. For example, with respect to claim 18, Cooke and Wong do not teach or suggest a method that includes generating a rule in Extensible Markup Language (XML) format based on the routing information, storing the XML-based rule in a rule set, assessing the XML-based rule based on at least a portion of the medical imaging data, and routing the network communication based on the assessment of the XML-based rule.

Cooke does not teach or suggest the use of XML in generating a rule for routing a network communication. Wong also does not teach or suggest the use of XML in generating a rule for routing a network communication. In other words, Cooke and Wong do not use XML in generating a rule. Wong mentions that XML can allow the definitions of user-defined types to offload some processing required in the middleware and the client (page 90, second column, second full paragraph), and that XML will further enhance browser capabilities by providing user-defined types, (page 87, first column, first full paragraph) but not that XML is used for generating a rule.

Accordingly, reconsideration and withdrawal of the §103 rejection for independent claim 18, as well as those claims which depend therefrom, is respectfully requested. Claims 19 and 20 are dependent claims upon independent

claim 18. Accordingly, Applicant asserts that claims 18-20 are deemed allowable upon the basis discussed above.

Reconsideration and withdrawal of the 103 rejection for claims 18-20 is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 236-0122 to facilitate prosecution of this matter.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AF Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this _6th_ day of _March_ , 2006.

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(Monday).